National Institute of Environmental Health Sciences

Heat and health in Adelaide, South Australia: Assessment of heat thresholds and temperature relationships

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Abstract:

BACKGROUND: Climate change projections have highlighted the need for public health planning for extreme heat. In Adelaide, South Australia, hot weather is characteristic of summer and heatwaves can have a significant health burden. This study examines the heat thresholds and temperature relationships for mortality and morbidity outcomes in Adelaide. METHODS: Daily maximum and minimum temperatures, daily mortality, ambulance call-outs, emergency department (ED) presentations and hospital admissions were obtained for Adelaide, between 1993 and 2009. Heat thresholds for health outcomes were estimated using an observed/expected analysis. Generalized estimating equations were used to estimate the percentage increase in mortality and morbidity outcomes above the threshold temperatures, with adjustment for the effects of ozone (O(3)) and particulate matter

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Temperature

Air Pollution: Interaction with Temperature, Ozone, Particulate Matter

Temperature: Extreme Heat

Geographic Feature:

resource focuses on specific type of geography

Ocean/Coastal, Urban

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Australasia

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Injury, Mental Health/Stress, Morbidity/Mortality, Respiratory Effect, Urologic Effect, Other Health Impact

Other Health Impact: heat-related illness

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Elderly

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified